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REMARKS

The Applicants request reconsideration of the rejection.

Claims 1-13 are pending.

As indicated by the Examiner on pages 2-3 of the Office Action, claims 1-12 have been elected pursuant to a telephone Restriction Requirement. The election is made with traverse, the Applicants noting that the Restriction Requirement is based on inventions I (claims 1-12) and II (claim 13) being allegedly related as subcombinations disclosed as usable together in a single combination.

However, all of the claims are directed to an automotive radar. Claims 1-12 are limited by a diffracted wave prevention structure, whereas claim 13 is not so limited, but requires a particular construction of the grounding conductor plate. Although it is true that the grounding conductor plate of claim 13 may be employed in an embodiment with a diffracted wave prevention structure, the Restriction Requirement must be supported by a finding that the respective inventions themselves are usable together in a single combination. In other words, to support the Restriction Requirement, the automotive radar of invention

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I must be a subcombination which is disclosed as usable together with the automotive radar of invention II. It appears, instead, that the Examiner has selected details of each automotive radar invention as being usable together, which is not an appropriate basis for restriction under MPEP §806.05(d) (subcombinations disclosed as usable together in a single combination). Accordingly, because the automotive radar of invention I is not disclosed as usable in a single combination with the automotive radar of invention II, the Restriction Requirement appears to be unwarranted.

Claims 1-2, 6 and 10 were rejected under 35 U.S.C. §102(b) as being anticipated by Honma, U.S. 6,335,699 (Honma '699). The Applicants traverse as follows.

Honma '699 is directed to a radome having a liquid crystal layer 12 whose permittivity can be changed by applying a voltage between control electrodes 13. The thickness and relative permittivity of the liquid crystal layer 12 are selected to permit passage of radio waves having a desired working frequency from a radar antenna when the liquid crystal layer is in the controlled state.

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By synchronizing a controlled state of the liquid crystal layer with the operation of the radar antenna, radio waves having the working frequency can be transmitted and signals received without hindrance by the appropriately applied voltage. However, when the radar antenna is off, the control voltage is applied appropriately to arrange the liquid crystal state so as to block unwanted radar waves, thus reducing interference.

The Examiner interprets the control electrodes 13 of Honma as the claimed diffracted wave prevention structure. However, the claimed diffracted wave prevention structure must be provided at the edges of the top face of the grounding conductor plate (see, for example, antenna plate 3). By this diffracted wave prevention structure, reflected waves directed toward the edges 15 of the grounding conductor plate are absorbed by the diffracted wave prevention structure (such as radio wave absorbers 4) and thereby prevented from reaching the edges 15. Therefore, the invention solves the prior art problem of unnecessary waves leaking to the receiving antennas.

In Honma, on the other hand, the control electrodes 13 do not constitute a diffracted wave prevention structure.

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Notably, the control electrodes are not seen to be provided at edges of the top face of the grounding conductor plate. In fact, there appears to be no relevant disclosure as to the positional relationship between the control electrodes 13 and the edges of the grounding conductor plate. Furthermore, despite the statement on page 3 of the Office Action, Honma does not discuss the grounding conductor plate of the radio wave source in any respect.

Claims 3 and 7 were rejected under 35 U.S.C. §103(a) as being unpatentable over Honma '699 in view of Matsuoka, U.S. 6,335,680 (Matsuoka). Although, as noted by the Examiner, Matsuoka teaches an electric wave absorbing member 9 which is placed between opening surfaces 8 corresponding respectively to the transmitting antenna 2 and receiving antenna 3, there is no suggestion of the combination of the radio wave absorber with another radio wave absorber covering the top face edges at least in part and arranged on the top face of the grounding conductor plate, as set forth in claim 2. Therefore, there does not appear to be any suggestion to the person of ordinary skill to use the electric wave absorber of Matsuoka in the invention of Honma '699, to thereby achieve the present

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invention as claimed in claim 3. Furthermore, while the Examiner cites Honma '699 as disclosing radio wave absorbers fitted in advance to the radome, the alleged "absorbers" (the control electrodes 13) of Honma '699 do not correspond to the electric wave absorbing member 9 of Matsuoka. There is simply no motivation to use the element 9 of Matsuoka interchangeably with the control electrodes of Matsuoka of Honma '699.


Claim 5 was rejected under 35 U.S.C. §103(a) as being unpatentable over Honma '699 in view of Matsuoka and Takao, JP 41-93329 (Takao). Claim 4 was rejected under 35 U.S.C. §103(a) as being unpatentable over Honma '699 in view of Takao. Finally, claim 11 was rejected under 35 U.S.C. §103(a) as being unpatentable over Honma '699. Takao does not provide the teachings missing from Honma and Matsuoka as discussed above. Furthermore, the Examiner supports the rejection of claim 11 by asserting that the modification set forth therein is "well-known" and a "design choice". The Applicants, respectfully, request the Examiner to provide a reference showing such "well-known" structure so that the record properly reflects the state of the art.

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In view of the foregoing amendments and remarks, the Applicants request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,



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